



STATE OF MARYLAND

DMMH

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October 1, 2010

Public Health & Emergency Preparedness Bulletin: # 2010:38 Reporting for the week ending 09/25/10 (MMWR Week #38)

CURRENT HOMELAND SECURITY THREAT LEVELS

National: Yellow (ELEVATED) *The threat level in the airline sector is Orange (HIGH)
Maryland: Yellow (ELEVATED)

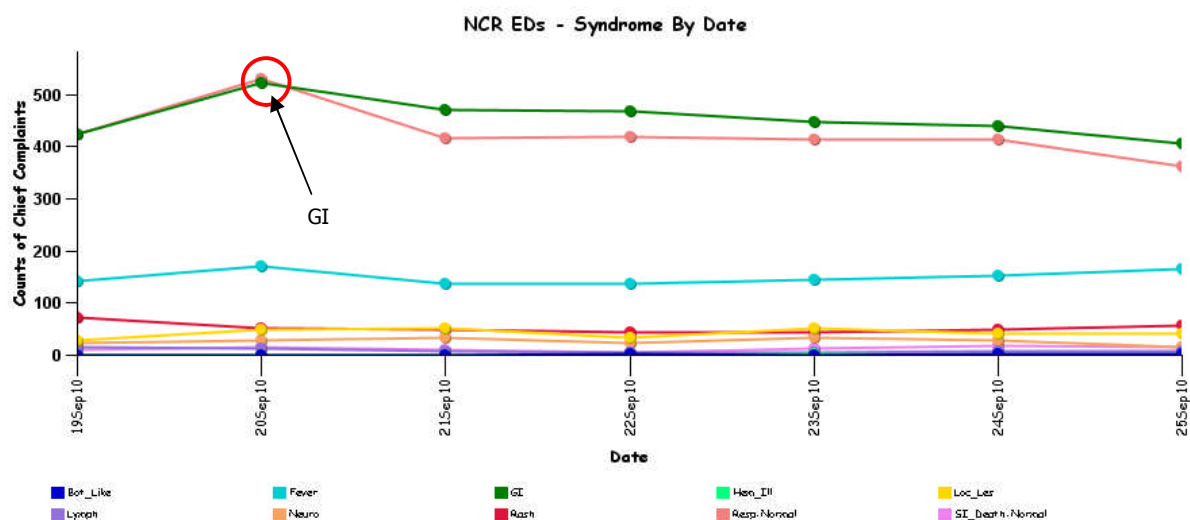
SYNDROMIC SURVEILLANCE REPORTS

ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):

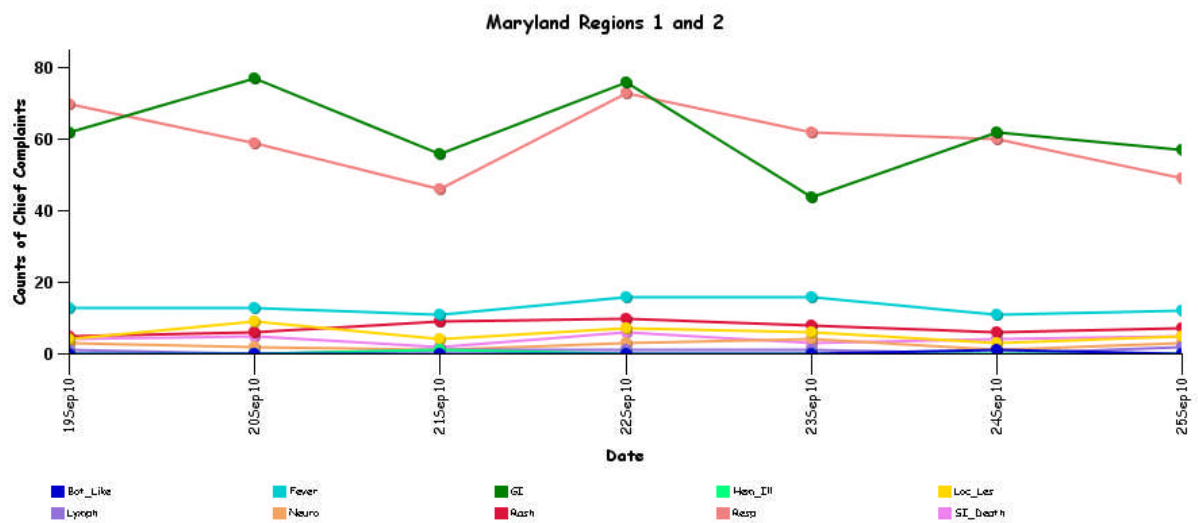
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Red alerts are generated when observed count for a syndrome exceeds the 99% confidence interval. Note: ESSENCE – ANCR Spring 2006 (v 1.3) now uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

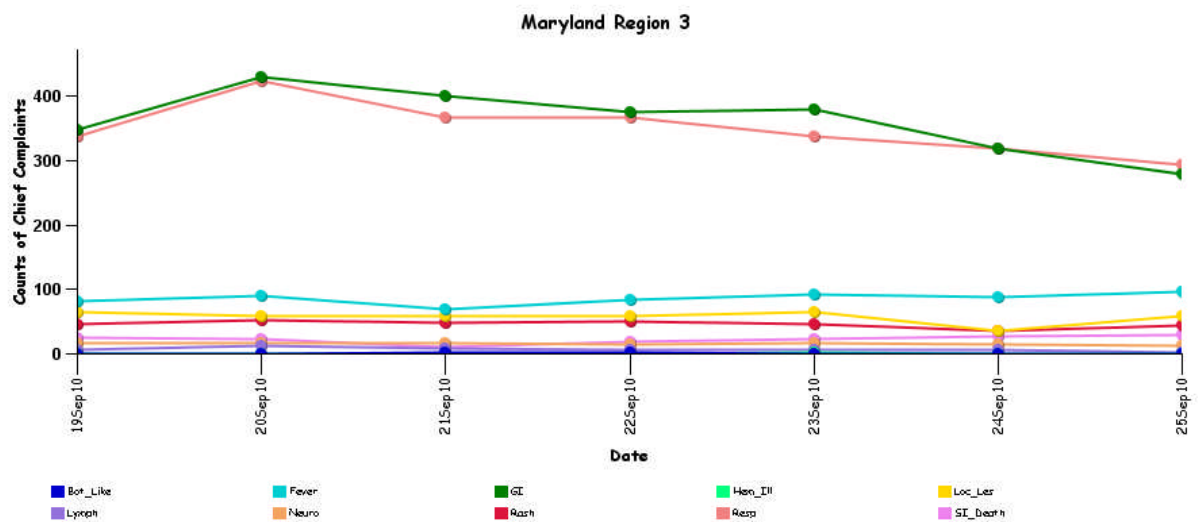
MARYLAND ESSENCE:



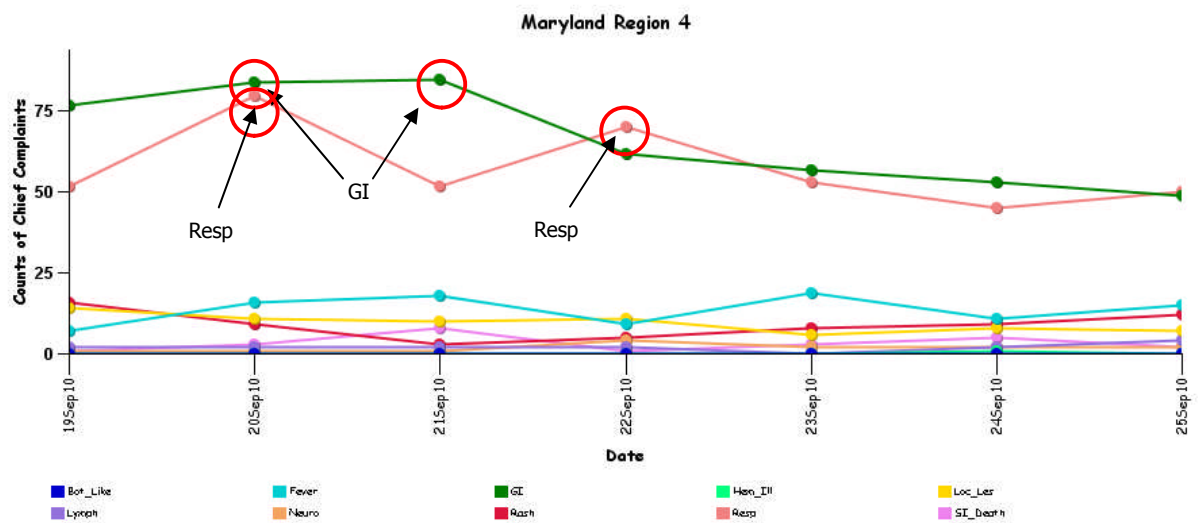
*Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE



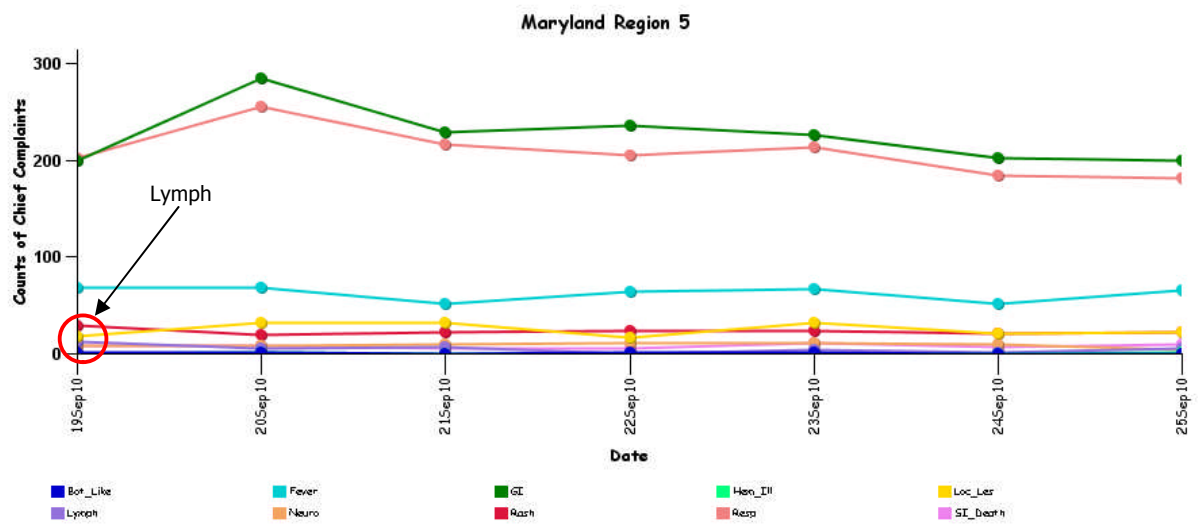
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore City, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE

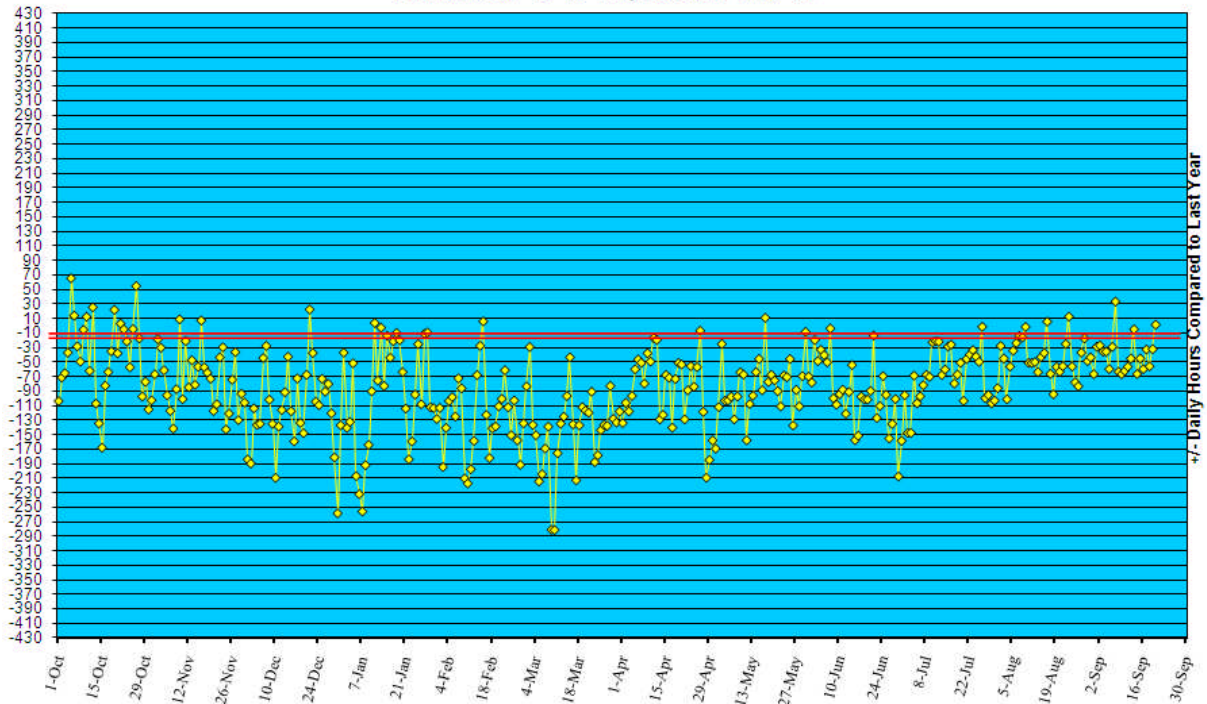


* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/09.

Statewide Yellow Alert Comparison Daily Historical Deviations October 1, '09 to September 20, '10



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in August 2010 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	<u>Aseptic</u>	<u>Meningococcal</u>
New cases (September 19 – September 25, 2010):	16	0
Prior cases (September 12 – September 18, 2010):	28	0
Week#38, 2009 (September 20 – September 26, 2009):	22	0

1 outbreak was reported to DHMH during MMWR Week 38 (September 19 - 25, 2010)

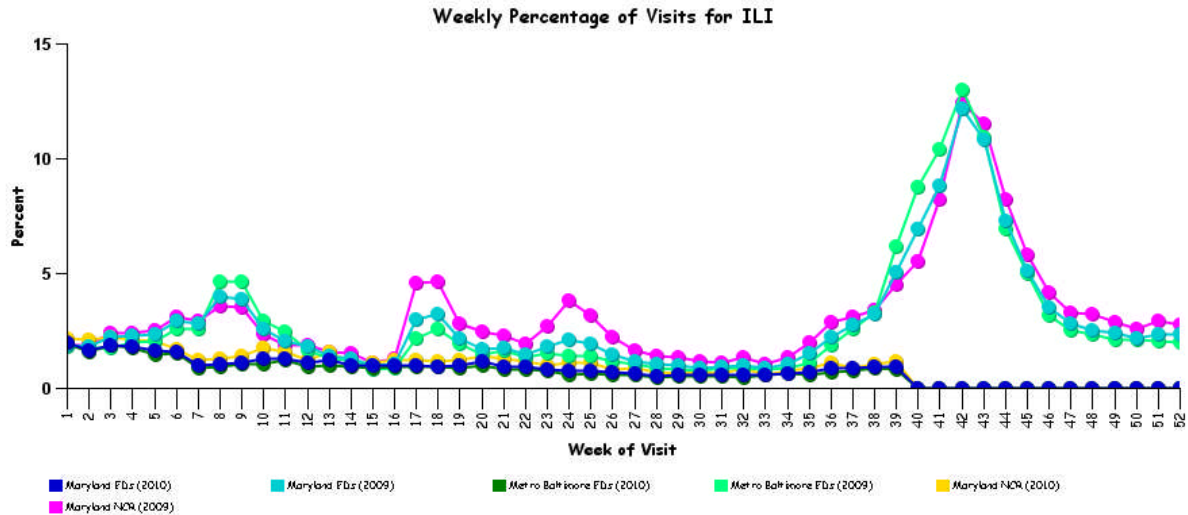
1 Rash illness outbreak

1 outbreak of MRSA in a Group Home

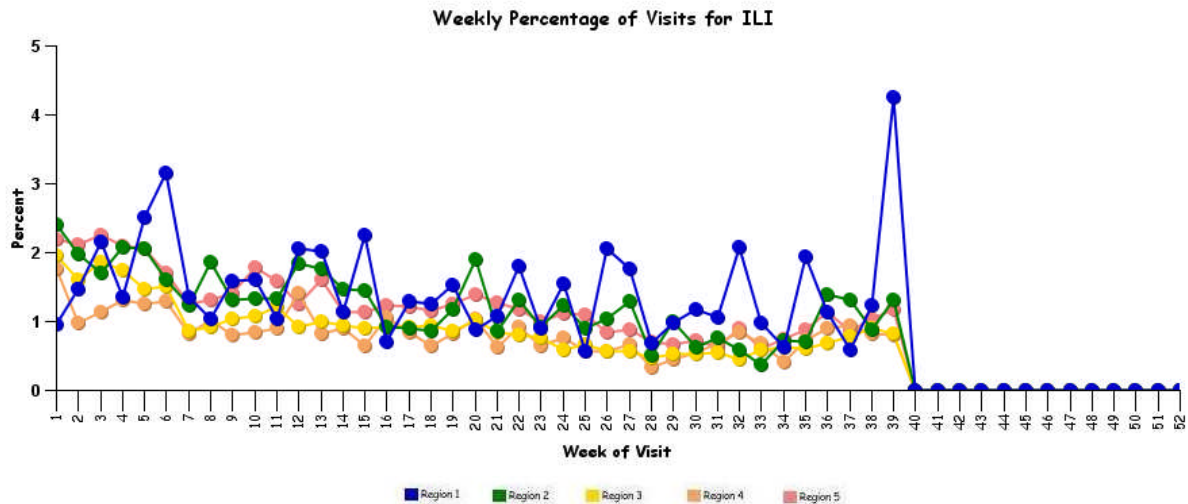
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.



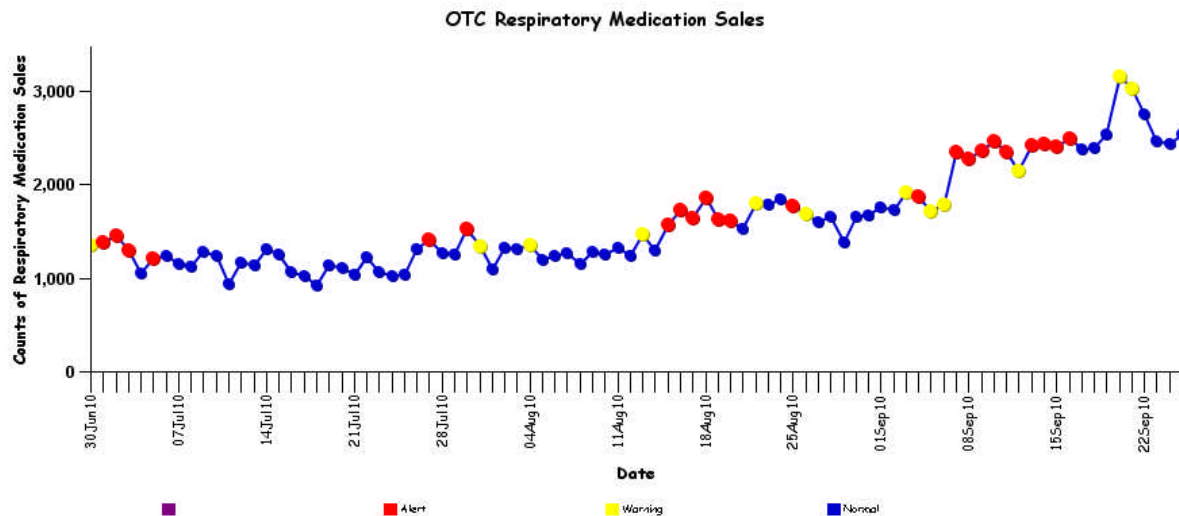
* Includes 2009 and 2010 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2010 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5

OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



AVIAN INFLUENZA-RELATED REPORTS:

WHO update: The current WHO phase of pandemic alert for avian influenza is 3.

In **Phase 3**, an animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks. Limited human-to-human transmission may occur under some circumstances, for example, when there is close contact between an infected person and an unprotected caregiver. However, limited transmission under such restricted circumstances does not indicate that the virus has gained the level of transmissibility among humans necessary to cause a pandemic.

As of August 31, 2010, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 505, of which 300 have been fatal. Thus, the case fatality rate for human H5N1 is about 59%.

H1N1 INFLUENZA (Swine Flu):

Resources:

<http://www.cdc.gov/h1n1flu/>

<http://www.dhmd.maryland.gov/swineflu/>

NATIONAL DISEASE REPORTS:

There were no national disease reports for MMWR Week 38.

INTERNATIONAL DISEASE REPORTS:

ANTHRAX, HUMAN (ENGLAND, SCOTLAND): 25 September 2010, Ongoing anthrax outbreak raises concerns the disease could become endemic in drug users. Heroin laced with anthrax has killed 16 people in the UK [13 in Scotland, 3 in England] over the past 9 months. The ongoing outbreak is the largest the country has seen for decades, and the 1st ever recorded in injecting drug users. With cases still turning up [the last case was reported in England in late August 2010, some 7 weeks after the last Scottish case.], questions linger as to whether the infection will persist in this population, and how the drug became contaminated in the 1st place. Since December 2009, infection with anthrax bacteria has been confirmed in 47 people in Scotland, and officials have investigated hundreds more suspected cases, said Colin Ramsay, consultant epidemiologist at Health Protection Scotland, earlier this month at the UK Health Protection Agency (HPA) annual conference. By February 2010 cases of the disease started appearing in England, where 3 people have now died and another recovered from their infection. At least 2 cases linked to the outbreak were also spotted in Germany. Only one case of anthrax in an injecting drug user has ever been seen before, in Norway in 2000. Medics involved in this case coined the phrase 'injectional anthrax' to describe the route of transmission and appearance of the infection. Both the transmission route and symptoms of injectional cases of anthrax differ from the existing 3 forms of the disease, which are

known as cutaneous (skin), gastrointestinal or inhalational anthrax. As a result of the current outbreak, injectional anthrax is now recognized as a new form of the disease. Speaking at the conference, held in Warwick, Ramsay said he fears the number of cases confirmed in the UK outbreak may only be the "tip of the iceberg." Although he is "reasonably confident" that investigators in Scotland have identified all cases that occurred in the country since December 2009, it is not clear that was when the outbreak began. "It seems improbable that the 1st ever case was seen in December," he says. Officials are investigating the possibility of earlier infections by testing the blood serum of drug users for the presence of anthrax antibodies, which would suggest a previous exposure to the bacteria. Heroin usually passes through England on the way to Scotland, which raises questions over the large difference in case counts between England and Scotland. "It may be something that makes them [heroin users in Scotland] more susceptible to the disease," Ramsay tells EHTF News. This could be alcohol-related liver damage, infection with hepatitis C, or immune system differences related to vitamin D deficiency, he suggests. Undiagnosed cases or less serious ones may be "slipping under the radar" too, he adds. But even within Scotland, not all drug users appear to run the same risk of getting infected with the bacteria. In some instances, people who used heroin prepared in the same spoon as a confirmed case did not contract the bug. "We have found that it has mostly affected older drug users, who may have more drug-related pathology than younger ones," says Ramsay. Tests on infecting strains of bacteria isolated in the UK have been completed for all but the most recent anthrax case. The results have revealed that the strains behind each case are "genetically indistinguishable," said Ramsay at the conference, leading investigators and the police to believe that a single rogue batch of heroin is laced with the bug. But this idea goes against previous police intelligence about heroin, which suggests that once the drug enters the country it is used up within days, explains Ramsay. The latest case, that of a 29-year-old drug user who died in late August [2010] in the English county of Leicestershire, has prompted speculation that heroin supplies could be chronically contaminated with the bacteria. This could lead to the disease becoming endemic in UK drug users, according to Ramsay. But speaking to EHTF News, he said that although the most recent case raises these concerns, there is currently no evidence to support this theory. "[The latest case] may have had belated access to the contaminated batch, or a new contaminated batch," he explains. "We have no way of knowing [at the moment]." Tests on the infecting strain in this case are ongoing. Delegates at the conference heard that the anthrax strain behind the outbreak had never been seen anywhere before. But Ramsay told EHTF News that the strain is only new to the UK. The bacteria isolated from affected drug users in the UK belong to the 'trans-Eurasian' or 'trans-Caucasian' branch of the anthrax family, and most closely resemble anthrax strains found in the Near-East and Middle East, according to Ramsay. [Those working on the molecular-epidemiology of anthrax usually refer to them as "industrials."] Work is continuing to further characterize the strain, he says. Phil Luton, a press officer at the HPA, was unsure whether anthrax has been found in any samples of heroin tested in England and Scotland. Ramsay says that although kilograms of the drug have been scrutinized, experts have found no sign of the bacteria. The latest theory as to how the drug became contaminated, according to Luton, is that at some point along the supply chain, the suspect heroin was transported while stored in anthrax-contaminated goat skin. Anecdotal reports from a prison inmate have confirmed that goat skins are used to smuggle heroin, delegates heard at the conference -- but it remains unclear how widespread the practice is, or whether further batches of the drug could become contaminated in this way. On the investigators' initial list of possible causes of contamination was a biological terror attack. "We couldn't rule out the possibility that it wasn't Al Qaeda trying to get anthrax into the UK," Ramsay said at the conference. Although this has now been largely dismissed, the coroner presiding over the death of a case in England was not satisfied that this suspicion had been ruled out entirely, Ramsay added. Aside from the possibility that the heroin itself is tainted with the bug, a cutting agent used in the preparation of the drug could also be to blame for the contamination. Heroin is thought to be 90 percent pure when it leaves the supplier, but only 10 percent pure by the time it reaches the user, according to Ramsay. In the current outbreak, 15 anthrax patients in Scotland were treated with an experimental drug: anthrax immunoglobulin, secured from the US Centers for Disease Control and Prevention. The treatment was previously used only in 3 patients, and tests into its effectiveness are ongoing. (Anthrax is listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

TICK-BORNE ENCEPHALITIS (RUSSIA): 25 September 2010, This year about 16,000 people in the Chelyabinsk oblast reported being bitten by ticks in its forests and 74 of them were diagnosed with tick-borne encephalitis (TBE). Although the numbers are 8.6 percent lower than during the previous year [2009], the risk of TBE virus infection is considerable. Scientists have reported that ticks of the genus *Dermacentor* genus have become more active recently. They advise that the autumn is the optimal time for immunization against TBE virus infection, since the high risk season is from Spring to Summer and protective immunity takes some time to develop. It is planned this autumn to immunize more than 30,000 1st-grade pupils in the Chelyabinsk oblast. (Viral Encephalitis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

ANTHRAX, HUMAN, BOVINE (BANGLADESH): 24 September 2010, Properly cooking meat in 120 degree Celsius [248 DEG F] temperature is an easy way to avert anthrax, said the experts in the capital yesterday at a seminar. They also said the spore (germ) of anthrax cannot sustain in 120 degree Celsius. But we are use to cooking meat in a pot at 100 degree Celsius [212 DEG F] temperature which cannot ensure whether the anthrax spore is destroyed, they added in a seminar titled 'Anthrax: Public Health Issues' which was held at the Bangabandhu Sheikh Mujib Medical University (BSMMU). Sources said as people are affected with the disease for the 2nd time, it created panic among them and consumption of red meat has reduced in last few weeks. Meanwhile, 10 fresh anthrax cases in humans were suspected in Pabna yesterday [22 Sep 2010] taking the number of the infected to 599 in the country since 18 Aug 2010. In addition, 4 cases were confirmed in Santhia and 4 in Faridpur upazila, according to the Institute of Epidemiology, Disease Control and Research (IEDCR). But the government has taken various steps to control anthrax including vaccinating the cattle in affected areas, treating the patients, and screening the cattle coming from India through the 22 points of the country, said State Minister for Health Mozibur Rahman Fakir in the seminar. He also said that before the Eid-ul-Azha, public health experts would screen the cattle and certificates would be given. The livestock, health and LGRD ministry are working together in this regard and a National Steering Committee is already formed. The experts in the seminar said the incidence of anthrax is showing a downtrend and it is likely to ease within a short time. They also suggested blanket vaccination of the cattle, use of antibiotics to treat the cattle, burying the sick dead animals after being wrapped in polythene and increasing community awareness to tackle anthrax. (Anthrax is listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

SALMONELLOSIS, SEROTYPE TYPHIMURIUM DT8 (ENGLAND, NORTHERN IRELAND): 24 September 2010, Duck eggs and duck products have been implicated in a national outbreak of salmonellosis which, the Health Protection Agency [HPA] says,

has led to the hospitalization of 2 people and the death of one. The outbreak involves *Salmonella* [enteric serotype] Typhimurium DT8, a strain, which is often associated with ducks. According to the HPA, there have been 63 reports of human infection in England and Northern Ireland in 2010, compared with 47 in 2009 and 34 in 2008. "As soon as we first noticed an increase we started detailed investigations, interviewing cases to find the common cause of illness and to identify the source of the outbreak," said the HPA's Dilys Morgan. "It became clear from our investigations that the increase was related to the consumption of duck products, mainly eggs." A spokeswoman for the HPA said there had been an acceleration in the number of salmonella cases over the summer months, "something we had not seen before", with the greatest concentration in the south-east and north-west of the country. She added that the cases related to commercial flocks of ducks, not backyard flocks. The Food Standards Agency has subsequently issued a statement reminding consumers and caterers of the importance of good hygiene when handling and preparing duck eggs. "Duck eggs may occasionally be contaminated with salmonella, both on their shells or, more rarely, internally," it said. "Duck eggs should be cooked thoroughly until both the white and yolk are solid." (Food Safety Threats are listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

SALMONELLOSIS, SEROTYPE BAREILLY (ENGLAND, SCOTLAND): 24 September 2010, Health experts are urging people to take extra care when preparing bean sprouts after an outbreak of an unusual type of *Salmonella*. The warning comes after 68 people in England and 15 people in Scotland tested positive for *Salmonella* [enteric serotype] Bareilly in recent weeks. The outbreak came to light after routine testing by a salad producer found the bacteria in bean sprouts. The Food Standards Agency said the outbreak's source was still unknown. They have advised that anyone planning to eat bean sprouts should cook them until steaming hot before consumption. Dr Joe Kearney, director of the Health Protection Agency in the East of England, said: "Outbreaks of *Salmonella* Bareilly are under investigation in northwest England and Scotland and a greater than expected number of cases have been observed in England. We're looking for possible links between the northwest and Scottish outbreaks and attempting to find potential sources of the national increase. It's an extensive exercise." (Food Safety Threats are listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

ANTHRAX, HUMAN, BOVINE (RUSSIA): 24 September 2010, Cases of anthrax both in animals and humans have been reported in Russia's southern Krasnodar territory, a spokesman for the Southern regional emergencies centre told Itar-Tass on Friday [24 Sep 2010]. According to the spokesman, anthrax infections have been confirmed at a dairy farm in the village of Uspenskoye. As many as 20 infected cows have already been slaughtered, and their carcasses have been burnt. Measures are being taken to prevent the spread of the disease. Moreover, 2 persons have been hospitalized with suspected anthrax. The health condition of 30 more farm's staff members is being monitored. (Anthrax is listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

ANTHRAX, HUMAN, LIVESTOCK (BHUTAN): 23 September 2010, At least one person has died of suspected pulmonary anthrax and about 8 people were affected with cutaneous anthrax in Zhemgang as of 15 Sep 2010, according to the officials of the national centre for animal health (NCAH). A total of 25 cattle, 8 horses/mules, 4 pigs and 6 cats were also reported dead due to the anthrax outbreak. According to the officials, the outbreak of anthrax in the dzongkhag could have 1st occurred in a farmer's cattle herd in Bloktong village in Panbang dungkhag. In the 2nd week of July 2010, dried meat from farmer T's herd was taken to a village called Pongchaling to be served to those carrying out construction work. A couple of weeks later, a pig was reported dead at Pongchaling after having been fed the meat. Later, a series of deaths occurred in his herd in Kagtong, where he lost 7 cattle. The meat from dead cattle was also consumed and sold to his neighbours. By then, T had developed lesions in the lower region of his neck. Similar lesions developed in other people, who were involved in dressing the carcasses. Some also reported swelling of arms, legs and abdominal pain. Among others, one had complained of heaviness in the chest with breathing difficulties and was taken to a basic health unit. The person succumbed to the illness. Officials recorded a 2nd outbreak on 25 Aug 2010 in villager RT's herd in a Narang village. He lost 3 horses and 7 cattle. On 28 Aug 2010, another outbreak occurred in SD's herd in Dophu village, where he lost 4 of his cattle. The disease spread to more herds, and the last was detected in Pongchaling village, where a government JX breeding bull died. The blood smears collected from the dead animals were examined at the regional livestock development centre in Zhemgang and the national centre for animals' health (NCAH). The findings, along with clinical symptoms and history, indicated the disease to be anthrax. The officials said the pigs were affected after being fed meat waste, while cats were fed raw meat. Upon visiting the area on 2 Aug 2010, a team from the regional livestock development centre in Zhemgang conducted awareness meetings among farmers; about 90 kg of dried meat was disposed of, and in-contact animals were provided with [authorized] antibiotics. Anthrax is a bacterial disease primarily of herbivorous animals, although other mammals and some birds have been known to contract it, and is caused by the bacteria *Bacillus anthracis*. Humans generally become infected directly or indirectly from affected animals or occupational exposure to contaminated animal products. The officials said the animals dying of anthrax should be buried at least 2 meters deep after being covered with lime, or they should be incinerated. (Anthrax is listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

CRIMEAN CONGO HEMORRHAGIC FEVER (PAKISTAN): 23 September 2010, A female patient, who has been undergoing treatment at the Shifa International Hospital after being suspected as a patient with Crimean-Congo hemorrhagic fever (CCHF), has been confirmed positive for the infection by the National Institute of Health (NIH). The female patient who belongs to Village Toot, Dhoke Golguppa of Tehsil Pindigheb, Attock [district, Punjab province] was brought to the Holy Family Hospital [HFH], Rawalpindi, on 14 Sep 2010 with high-grade fever and continued, uncontrolled nasal and throat bleeding, while bleeding from her skin and rectum was also reported. The patient, aged 35, had earlier undergone treatment at a private hospital in her native town for 2 days, but her fever did not subside. The HFH, after suspecting the female patient to be a case of CCHF, sent her blood sample to the NIH, Islamabad, which declared the patient positive for the infection on Mon 20 Sep 2010. "At HFH, blood transfusions were administered to the patient, but she was not improving significantly," said the patient's brother while talking to The News on Tue 21 Sep 2010. "One of our acquaintances advised us to take her to Shifa International Hospital." He added that they took the patient to Shifa International Hospital on 16 Sep 2010, where she is now improving. "We have gone beyond our limits and have spent nearly Rs 0.2 million [USD 2,350] so far on treatment of the patient, who has 2 daughters and 2 sons." The mortality rate for hemorrhagic fevers [such as CCHF] ranges from 50 to 90 per cent. Persons with [such infections] experience headache, high fever, muscle pain and vomiting along with internal and external bleeding. According to the NIH guidelines, CCHF is caused by a *navivirus* (family

Bunyaviridae) transmitted to humans by the bite of *Hyalomma spp.* ticks or by direct contact with blood of an infected animal or human. CCHF was 1st described in Crimea in 1944 and identified in 1956 in the Congo. Nearly 300 confirmed cases of CCHF have so far been reported in Pakistan from 1976 to 2003. The disease was 1st reported in Pakistan in 1976, but the number of cases has shown a dramatic rise since 2000. The News has learnt that the victim, who has been undergoing treatment in the Intensive Care unit of Shifa International Hospital in strict isolation, is improving. When she was taken to Shifa International Hospital, she was bleeding from the nose, mouth and rectum and had bruises on her skin. Her haemoglobin level had dropped to 5 from 14. At Shifa hospital, she has been given blood and platelets along with treatment, and now she is improving, said Fateh Khan. He said, however, that treatment costs from Rs 30,000 to Rs 35,000 [USD 350-400] per day, and the family is not in a position of retaining treatment at Shifa Hospital. "We want to shift the patient to some public sector hospital like the Pakistan Institute of Medical Sciences (PIMS), Islamabad, but it seems difficult, keeping in view the condition of the patient" [At the time of this report, the funding of the patient's further treatment had not been resolved]. CCHF is a highly infectious disease. It is relevant that nearly 7 years back, a female doctor of Holy Family Hospital died after developing CCHF while treating a CCHF patient. Earlier, some 3 decades back, a renowned health professional in the city also died of the infection while trying to treat a CCHF patient. (Viral Hemorrhagic Fevers are listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

JAPANESE ENCEPHALITIS AND OTHER (INDIA): 21 September 2010, In Gorakhpur district, 7 more persons died of encephalitis, taking the toll in the deadly disease in eastern Uttar Pradesh to 319, health officials today said [20 Sep 2010]. All 7 patients died in Baba Raghav Das Medical College Hospital [BRDMCH], additional director (Health) UK Srivastava said, adding 39 new patients were admitted in the hospital today [20 Sep 2010]. Srivastava said of the total 319 deaths so far, 299 took place in BRDMCH while the remaining were reported from government hospitals in Gorakhpur, Siddharthnagar, Kushinagar, Maharajganj, Basti, and Deoria districts. (Viral Encephalitis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST:

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: <http://preparedness.dhmd.maryland.gov/>

Maryland's Resident Influenza Tracking System: www.tinyurl.com/flu-enroll

Moving Mental Health into the Disaster-Preparedness Spotlight, NEJM 363; 13. Coast communities. State mental health and substance-abuse agencies report an increase in emotional distress and demand for assistance. Calls to domestic violence hotlines are increasing. Fishermen fear for their families' economic future, and communities wonder how the influx of clean-up workers and volunteers will affect their way of life. Most major disasters, including the Exxon Valdez spill, Hurricane Katrina, and the 9/11 attacks, have been followed by increases in the prevalence of mental illness, domestic violence, and substance abuse.^{1,2} Emotional distress may manifest in increased rates of driving while intoxicated, theft, domestic violence, and assault. Such consequences may go unrecognized, however, as health officials and the public focus on physical illness, injury, and environmental devastation. <http://www.nejm.org/doi/pdf/10.1056/NEJMp1008304>

NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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